Abstract

A system and method for enhanced data connections via an asymmetric data network receives incoming modem calls and discriminates those intended for enhanced service Web or other service, for instance by domain name. Those calls destined for that type of enhanced treatment may be received via modem banks or other RAS resources communicating with the PSTN or otherwise, and directed to an enhancement cluster or other nodes or locations for compression, caching, optimization or other processing designed to give the user's Web browsing or other service an improved or more responsive feel. According to embodiments of the invention in one regard, the user IP sessions may be tunneled to the enhancement cluster using a tunneling protocol, such as Layer 2 Tunneling Protocol (L2TP) or others. According to such protocols, the user's IP datagrams may be transparently embedded into larger packets which pass as point-to-point protocol (PPP) data, so that virtual direct connections to the enhancement cluster and then to Web or others sites may be established. All user data flows through the enhancement cluster in both directions, and may be compressed, for instance at ratios of up to 5:1 or more. Caching, security and other features may likewise be applied to the data stream, resulting in a more responsive and feature-rich service for end users.